PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

RECEIVED
16 FEB 2004
WIPO   PCT

Applicant's or agent's file reference 1064.P004PCT	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416).

International Application No. **PCT/SG2003/000036**	International Filing Date *(day/month/year)* 24 February 2003	Priority Date *(day/month/year)* 2 April 2002

International Patent Classification (IPC) or national classification and IPC

Int. Cl. [7]   G06F 17/30, 17/60

Applicant
   REUTERS LIMITED et al

---

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of   3   sheets, including this cover sheet.

   [X] This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of   7   sheet(s).

3. This report contains indications relating to the following items:

   I   [X]   Basis of the report

   II   [ ]   Priority

   III   [ ]   Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

   IV   [ ]   Lack of unity of invention

   V   [X]   Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

   VI   [ ]   Certain documents cited

   VII   [ ]   Certain defects in the international application

   VIII [ ]   Certain observations on the international application

Date of submission of the demand 11 September 2003	Date of completion of the report 5 February 2004
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer **P. THONG** Telephone No. (02) 6283 2128

Form PCT/IPEA/409 (Cover sheet) (July 1998)

I.	**Basis of the report**

1. With regard to the **elements of the international application:***

   ☐ the international application as originally filed.

   ☒ the description, pages **1-22,** as originally filed,

   pages , filed with the demand,

   pages , received on with the letter of

   ☒ the claims, pages , as originally filed,

   pages , as amended (together with any statement) under Article 19,

   pages , filed with the demand,

   pages **23-29,** received on **29 January 2004** with the letter of **29 January 2004**

   ☒ the drawings, pages **1/13-13/13,** as originally filed,

   pages , filed with the demand,

   pages , received on with the letter of

   ☐ the sequence listing part of the description:

   pages , as originally filed

   pages , filed with the demand

   pages , received on with the letter of

2. With regard to the **language,** all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
   These elements were available or furnished to this Authority in the following language which is:

   ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

   ☐ the language of publication of the international application (under Rule 48.3(b)).

   ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

   ☐ contained in the international application in written form.

   ☐ filed together with the international application in computer readable form.

   ☐ furnished subsequently to this Authority in written form.

   ☐ furnished subsequently to this Authority in computer readable form.

   ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

   ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

4. ☐ The amendments have resulted in the cancellation of:

   ☐ the description, pages

   ☐ the claims, Nos.

   ☐ the drawings, sheets/fig.

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

---

* *Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).*

** *Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report*

V.	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	**1-40**	**YES**
	Claims		**NO**
Inventive step (IS)	Claims	**1-40**	**YES**
	Claims		**NO**
Industrial applicability (IA)	Claims	**1-40**	**YES**
	Claims		**NO**

2. Citations and explanations (Rule 70.7)

D1 = US 6078924
D2 = WO 02/13065
D3 = US 6128624
D4 = US 6055567
D5 = US 6044374

None of the citations discloses the subject matter of the claims.

Therefore the subject matter of the claims is new and meets the requirements of Article 33(2) PCT with regard to novelty. The subject matter of the claims is not obvious and meets the requirements of Article 33(3) PCT with regard to inventive step. The invention as defined in the claims is considered to meet the requirements of Industrial Applicability under Article 33(4) of the PCT because it can be made by, or used in, industry.

CLAIMS

1.   A metadata database management system for at least one database, wherein the at least one database is coupled to receive information from at least one information source and coupled to provide information to at least one information consumer, the metadata database management system comprising:

a metadata database for storing metadata associated with data stored in the at least one database, for storing metadata associated with the at least one information source, and for storing metadata associated with the at least one information consumer; and

a knowledge manager coupled to the metadata database, the knowledge manager comprising at least one metadata application for managing a plurality of knowledge aspects of the at least one database, the at least one metadata application for accessing at least some of the metadata stored in the metadata database, and the at least one metadata application for using the at least some of the metadata to manage at least one of the plurality of knowledge aspects of the at least one database;

wherein at least some of the metadata stored in the metadata database constitute at least one portion of the metadata database, and

wherein the at least one portion of the metadata database is integrated by being inter-coupled by a common information bus to the at least one metadata application of the knowledge manager;

further wherein the at least some of the metadata stored in the metadata database constitute a multiple language portion of the metadata database, and wherein the at least some of the metadata comprises at least one multiple language metadata.

2.   A metadata database management system in accordance with claim 1 being adapted for dynamically coupling to the at least one database.

3.   A metadata database management system in accordance with claim 1 being adapted for dynamically coupling to the plurality of information sources.

4.   A metadata database management system in accordance with claim 1 being adapted for dynamically coupling to the plurality of information consumers.

5.   A metadata database management system in accordance with claim 1, wherein the at least one information source comprises at least another database, the metadata database management system for coupling to the at least another database, and the metadata database for storing metadata associated with the at least another database.

6.   A metadata database management system in accordance with claim 5, wherein the at least another database has at least another one information source coupled thereto, the metadata database management system for coupling to the at least another one information source, and the metadata database for storing metadata associated with the at least another one information source.

7.   A metadata database management system in accordance with claim 5, wherein the at least another database has at least another one information consumer coupled thereto, the metadata database management system for coupling to the at least another one information consumer, and the metadata database for storing metadata associated with the at least another one information consumer.

8.   A metadata database management system in accordance with claim 1, wherein the at least one information consumer comprises at least one other database, the metadata database management system for coupling to the at least one other database, and the metadata database for storing metadata associated with the at least one other database.

9.   A metadata database management system in accordance with claim 8, wherein the at least one other database is coupled to at least one other information source, the metadata database management system for coupling to the at least one other information source, and the metadata database for storing metadata associated with the at least one other information source.

10. A metadata database management system in accordance with claim 8, wherein the at least one other database is coupled to at least one other information consumer, the metadata database management system for coupling to the at least one other information consumer, and the metadata database for storing metadata associated with the at least one other information consumer.

11. A metadata database management system in accordance with claim 1, wherein the at least some of the metadata stored in the metadata database constitute a knowledge portion of the metadata database, and wherein the at least some of the metadata comprises at least one knowledge metadata.

12. A metadata database management system in accordance with claim 1, wherein the at least some of the metadata stored in the metadata database constitute a knowledge entity portion of the metadata database, and wherein the at least some of the metadata comprises at least one knowledge entity metadata.

13. A metadata database management system in accordance with claim 1, wherein the at least some of the metadata stored in the metadata database constitute a data mapping portion of the metadata database, and wherein the at least some of the metadata comprises at least one data mapping metadata.

14. A metadata database management system in accordance with claim 1, wherein the at least some of the metadata stored in the metadata database constitute a data dictionary portion of the metadata database, and wherein the at least some of the metadata comprises at least one data dictionary metadata.

15. A metadata database management system in accordance with claim 1, wherein the at least some of the metadata stored in the metadata database constitute a change management portion of the metadata database, and wherein the at least some of the metadata comprises at least one change management metadata.

16.   A metadata database management system in accordance with claim 1, wherein the at least some of the metadata stored in the metadata database constitute a business rules portion of the metadata database, and wherein the at least some of the metadata comprises at least one business rules metadata.

17.   A metadata database management system in accordance with claim 1, wherein the at least some of the metadata stored in the metadata database constitute a business event portion of the metadata database, and wherein the at least some of the metadata comprises at least one business event metadata.

18.   A metadata database management system in accordance with claim 1, wherein the at least some of the metadata stored in the metadata database constitute a reference and standards portion of the metadata database, and wherein the at least some of the metadata comprises at least one reference and standards metadata.

19.   A metadata database management system in accordance with claim 1, wherein the at least some of the metadata stored in the metadata database constitute a document resources portion of the metadata database, and wherein the at least some of the metadata comprises at least one document resources metadata.

20.   A metadata database management system in accordance with claim 1, wherein the at least one metadata application comprises a data model manager for using the at least some of the metadata to manage at least one data model of the at least one database.

21.   A metadata database management system in accordance with claim 1, wherein the at least one metadata application comprises a data dictionary manager for using the at least some of the metadata to manage at least one data dictionary of the at least one database.

22. A metadata database management system in accordance with claim 1, wherein the at least one metadata application comprises a knowledge entity manager for using the at least some of the metadata to manage at least one knowledge entity of the at least one database.

23. A metadata database management system in accordance with claim 1, wherein the at least one metadata application comprises a data mapper for using the at least some of the metadata to manage at least one data mapping of the at least one database.

24. A metadata database management system in accordance with claim 1, wherein the at least one metadata application comprises a change manager for using the at least some of the metadata to manage at least one change associated with the at least one database.

25. A metadata database management system in accordance with claim 1, wherein the at least one metadata application comprises a business rules processor for using the at least some of the metadata to manage at least one business rule associate with the at least one database.

26. A metadata database management system in accordance with claim 1, wherein the at least one metadata application comprises a reference and standards processor for using the at least some of the metadata to manage at least one reference of the at least one database.

27. A metadata database management system in accordance with claim 27, wherein the at least one reference comprises at least one standard.

28. A metadata database management system in accordance with claim 1, wherein the at least one metadata application comprises a performance manager for using the at least some of the metadata to manage at least one performance aspect of the at least one database.

29. A metadata database management system in accordance with claim 1, wherein the at least one metadata application comprises a graphical user interface for using the at least some of the metadata to manage at least one graphical user interface aspect of the at least one database.

30.   A knowledge manager for a metadata database management system of at least one database, wherein the at least one database is coupled to receive information from at least one information source and coupled to provide information to at least one information consumer, the knowledge manager comprising:

at least one metadata application for coupling to a metadata database, the at least one metadata application for managing a plurality of knowledge aspects of the at least one database, the at least one metadata application for accessing at least some of the metadata stored in the metadata database, and the at least one metadata application for using the at least some of the metadata to manage at least one of the plurality of knowledge aspects of the at least one database;

wherein at least some of the metadata stored in the metadata database constitute at least one portion of the metadata database, and

wherein the at least one portion of the metadata database is integrated by being inter-coupled by a common information bus to the at least one metadata application of the knowledge manager;

further wherein the at least some of the metadata stored in the metadata database constitute a multiple language portion of the metadata database, and wherein the at least some of the metadata comprises at least one multiple language metadata.

31.   A knowledge manager in accordance with claim 30, wherein the at least one metadata application comprises a data model manager for using the at least some of the metadata to manage at least one data model of the at least one database.

32.   A knowledge manager in accordance with claim 30, wherein the at least one metadata application comprises a dictionary manager for using the at least some of the metadata to manage at least one data dictionary of the at least one database.

33.   A knowledge manager in accordance   with claim 30, wherein the at least one metadata application comprises a knowledge entity manager for using the at least some of the metadata to manage at least one knowledge entity of the at least one database.

34.   A knowledge manager in accordance with claim 30, wherein the at least one metadata application comprises a data mapper for using the at least some of the metadata to manage at least one data mapping of the at least one database.

35.   A knowledge manager in accordance with claim 30, wherein the at least one metadata application comprises a change manager for using the at least some of the metadata to manage at least one change associated with the at least one database.

36.   A knowledge manager in accordance with claim 30, wherein the at least one metadata application comprises a business rules processor for using the at least some of the metadata to manage at least one business rule associate with the at least one database.

37.   A knowledge manager in accordance with claim 30, wherein the at least one metadata application comprises a reference and standards processor for using the at least some of the metadata to manage at least one reference of the at least one database.

38.   A knowledge manager in accordance with claim 37, wherein the at least one reference comprises at least one standard.

39.   A knowledge manager in accordance with claim 30, wherein the at least one metadata application comprises a performance manager for using the at least some of the metadata to manage at least one performance aspect of the at least one database.

40.   A knowledge manager in accordance with claim 30, wherein the at least one metadata application comprises at least one graphical user interface for using the at least some of the metadata to manage at least one graphical user interface aspect of the at least one database.